



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

09/961,297

09/25/2001

Nicola Benvenuti

PAT 2689- 2-US

6788

26123

7590

01/23/2006

BORDEN LADNER GERVAIS LLP
WORLD EXCHANGE PLAZA
100 QUEEN STREET SUITE 1100
OTTAWA, ON K1P 1J9
CANADA

EXAMINER

PHAN, MAN U

ART UNIT

PAPER NUMBER

2665

DATE MAILED: 01/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/961,297	Applicant(s) BENVENUTI ET AL.	
	Examiner Man Phan	Art Unit 2665	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 November 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☐ Claim(s) 1-5, 8-22, 24-26 and 28-31 is/are rejected.
- 7) ☒ Claim(s) 6, 7, 23 and 27 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This communication is in response to applicant's 11/02/2005 amendment in the application of Benvenuti et al. for an "Transparent error count transfer method and apparatus" filed 09/25/2001. This application claims Priority from Provisional Application 60307372 filed 7/25/2001. The amendment and response has been entered and made of record. Claims 1-31 are pending in the application.

Remarks

2. Applicant's remark with regard to the rejection under 35 USC 103(a) are persuasive. However, applicant is required to submit a Declaration under 37 CFR.1.132 in support of the Applicant's statement of common ownership, and to overcome a cited patent pursuant to 37 CFR.1.131. Furthermore, for advance prosecution of application, the rejections of record under 35 U.S.C. ' 103 of the claims are withdrawn in view of the newly discovered reference to Yamayaki et al. (US#6,487,686). Accordingly, This action is made Non-Final. Rejections based on the newly cited reference follows.

Claim Rejections - 35 USC ' 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 5, 8-17, 19-22, 24-26, 28-31 are rejected under 35 U.S.C. 103(a) as being unpatentable over Arao (US#6,667,990) in view of Yamayaki et al. (US#6,487,686).

With respect to claims 8, 11, 14, 20, 24, 28 and 30, Arao (US#6,667,990) and Yamayaki et al. (US#6,487,686) disclose a novel system and method for transparent multiplexer/demultiplexer (TMUX) for use with a high speed connection between two points utilizing error counts for each tributary signal being transmitted through the TMUX, according to the essential features of the claims. Arao (US#6,667,990) discloses in Fig. 1 a schematic diagram illustrated an exemplary transmission terminal station apparatus in which a low-order group terminal device is connected through a low-speed line, and a high-order group terminal station device is

connected through a high-speed line. The transmission terminal station apparatus includes: (1) a first extraction unit which, when a multi-frame obtained by multiplexing a plurality of frames each having a payload in which data to be transmitted is stored and an overhead in which operation maintenance information of a network is stored is received from the high-order group terminal station device, extracts the operation maintenance information stored in the overhead of the multi-frame; (2) a second extraction unit for extracting detection information serving as information related to the operation maintenance information stored in the overhead of each frame when each frame included in the multi-frame is received by the high-order group terminal station device from each frame included in the multi-frame; (3) a separation unit for separating the multi-frame into a plurality of frames; and (4) a setting unit for inserting new operation maintenance information generated by using information related to the operation maintenance information extracted by the first extraction unit and the detection information extracted by the second extraction unit into the overhead of each frame separated by the separation unit to transmit the operation maintenance information to the low-order group terminal device (Col. 4, lines 30 plus).

However, Arao does not disclose expressly wherein the error count bit is inserted in at least one unused portion of the TOH according to a standard that defines the high speed frame. In the same field of endeavor, Yamayaki et al. (US#6,487,686) teaches a method and system for transporting of the encoded error rate utilizing the unused byte in the overhead (TOH) generated for the transparent multiplexer/demultiplexer (TMUX). Yamayaki et al. (US#6,487,686) discloses an error correction method and a transmission apparatus used in a transmission using a frame including a header and a payload are provided. In the error

correction method and the transmission apparatus, a pseudo error is inserted in check bits of the frame to be transmitted. Thus, an error-correcting function of a transmitter and a receiver can be easily tested. A mismatch of a state of validation or invalidation of the error-correcting function between the transmitter and the receiver can be avoided without affecting a main signal by inserting information on whether or not an error correction is performed in an unused area of the header in the transmitter (See Fig. 18 and Col. 2, lines 62 plus).

Regarding claims 3, 4 and 18, Yamayaki et al. further teach in Fig. 4 illustrated the structure of a typical standard SONET frame, in which the bytes B1 count and B2 count are available for encoded error counts (Col. 4, lines 45 plus).

Regarding claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26, they are method claims corresponding to the apparatus claims 8, 11, 14, 20, 24, 28 and 30 above. Therefore, claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26 are analyzed and rejected as previously discussed with respect to claims 8, 11, 14, 20, 24, 28 and 30.

Regarding claims 12, 15, 21, 25, 29, they are system claims corresponding to the method and apparatus claims above. Therefore, claims 12, 15, 21, 25, 29 are analyzed and rejected as previously discussed with respect to claims 1, 2, 5, 10, 13, 16, 17, 19, 22, 26 and 8, 11, 14, 20, 24, 28 and 30.

With respect to claim 31, this claim differ from claims Arao in view of Yamayaki that the claim recited a computer program product for performing the same basis of steps and apparatus of the prior arts as discussed in the rejection of claims 1, 2, 5, 8-17, 19-22, 24-26, 28-30. It would have been obvious to a person of ordinary skill in the art to implement a computer program product in Arao in view of Yamayaki for performing the steps and apparatus as recited

in the claims with the motivation being to provide an efficient enhancement to the transparent error count in TMUX system, and easy to maintenance, upgrade.

One skilled in the art would have recognized the need for the transparent error count in a TMUX system, and would have applied Yamayaki's teaching of the inserting encoded error counts the unused bytes of successive TMUX messages for transport to a second end of the span into Arao's novel use of code error in TMUX system. Therefore, It would have been obvious to a person of ordinary skill in the art at the time of the invention was made to apply Yamayaki et al.'s error correction method and transmission apparatus into Arao's transmission terminal station apparatus and network system with the motivation being to provide a method and system for transparent multiplexer/demultiplexer (TMUX) for use with a high speed connection between two points utilizing error counts for each tributary signal being transmitted through the TMUX.

Allowable Subject Matter.

5. Claims 6, 7, 23, 27 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for the indication of allowable subject matter: The closest prior art of record fails to disclose or suggest the steps of determining a synchronization status/channel identification bit pattern representative of the indication of synchronization status/channel identifier, and inserting the synchronization status/channel identification bit pattern into the transport overhead for the high-speed frame,

where the synchronization status/channel identification bit pattern is inserted in at least one portion of the transport overhead and where the at least one portion is unused according to the standard that defines the high-speed frame. The closest prior art of record fails to disclose or suggest whether receiving an indication of a quantity of errors associated the high speed-frame, and wherein determining the error count quantity is further based on the indication of the quantity of errors associated with high-speed frame, as specifically recited in the claims.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The Giorgetta et al. (US#6,892,336) is cited to show the gigabit Ethernet performance monitoring.

The Sugawara et al. (US#5,555,248) is cited to show the tandem connection maintenance.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Phan whose telephone number is (571) 272-3149. The examiner can normally be reached on Mon - Fri from 6:00 to 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu, can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

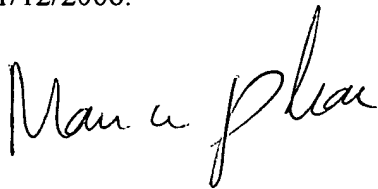
Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Art Unit: 2665

8. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have any questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at toll free 1-866-217-9197.

Mphan

01/12/2006.

A handwritten signature in black ink, appearing to read "Man u. Phan". The signature is written in a cursive, flowing style.

**MAN U. PHAN
PRIMARY EXAMINER**